



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,149	12/12/2000	Nikolai Nefedov	297-009990-US(PAR)	4688

7590

11/03/2005

Clarence A. Green
Perman & Green
425 Post Road
Fairfield, CT 06430

EXAMINER

WONG, BLANCHE

ART UNIT	PAPER NUMBER
----------	--------------

2667

DATE MAILED: 11/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/735,149

Applicant(s)

NEFEDOV, NIKOLAI

Examiner

Blanche Wong

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19, 20 and 22-28 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8, 12, 13 and 15 is/are rejected.
- 7) ☒ Claim(s) 3-7, 9-11, 14, 16-19 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 19 is objected to because of the following informalities: In In. 26, Examiner suggests replacing – second data filed – with “second data field”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1 and 2** are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Hagerman et al. (U.S. Pat No. 6,539,010).

With regard to cl. 1, Hagerman discloses a method for multiplexing communication connections (radio base stations in conjunction with the antennas communicate with a plurality of mobile terminals within a plurality of cells, col. 4, ln. 49-55) in a telecommunication system 60 (cellular radiocommunication system, col. 4, ln. 47-48) based on time division multiple access (TDMA, col. 4, ln. 40), comprising the steps of:

defining a burst structure (Fig. 8)(see also timeslot formats, col. 3, ln. 21; TDMA timeslot structures, col. 4, ln. 40 and col. 5, ln. 7)(burst is timeslot, col. 5, ln. 3) that

Art Unit: 2667

consists of symbols (data1,control,data2) and fills a time slot (Fig. 8 shows one timeslot) at a radio interface,

filling the burst structure with symbols (SYNC,F,RSVD,DATA, etc., col. 5, ln. 24-46), thus composing a transmission burst, and

transmitting the transmission burst with a time slot (Fig. 8 shows one timeslot);

wherein the step of filling the burst structure with symbols comprises the substeps of:
(in Fig. 8)

taking information symbols of a first kind (DATA1 is data bits being transmitted to a first terminal) and filling a first part (T1, col. 6, ln. 36) of the burst (Fig. 8 shows one timeslot) therewith,

taking information symbols of a second kind (DATA2 is data bits being transmitted to a second terminal) and filling a second part (T2, col. 6, ln. 36) of the burst (Fig. 8 shows one timeslot) therewith, and

taking control symbols (control information, col. 6, ln. 25-26) and filling certain control parts (control information may be disposed in one or more fields between the different terminals' data bits, col. 6, ln. 25-27; T3, col. 6, ln. 36) of the burst therewith.

With regard to cl. 2, Hagerman further discloses

taking information symbols (data bits) belonging to a first (DATA1 is data bits being transmitted to a first terminal) downlink communication connection between said base station and a mobile station and filling a first data field (DATA1) in the burst therewith, and

taking information symbols (data bits) belonging to a second (DATA2 is data bits being transmitted to a second terminal) downlink communication connection between said base station and a mobile station and filling a second data field (DATA2) in the burst therewith.

4. **Claim 15** is rejected under 35 U.S.C. 102(a) as being clearly anticipated by Lucent Technologies Inc (EP 0 980 153 A2, as provided by applicant).

With regard to cl. 15, in a typical scenario in a TDMA system (col. 1, ln. 41-42) with two mobile equipment 100,112 in Fig. 1, where one of the two mobile equipment is a transmitter of bursts with data structure such as 603 or 604 (claim 12), the other of the two mobile equipment is the receiver. It is inherent that there is a burst decomposer and means for separately attempting the decoding of different sequences of information symbols, irregardless of the kind(s) of information symbols, as long as there is a sequence, extracted from a transmission burst. (First DATA|D1 is in sequence with second DATA|D1 in 603; First DATA|D2 is in sequence with second DATA|D2 in 604) It is also inherent to receive successful, as oppose to unsuccessful, information symbols. That is, unsuccessful information symbols is the result of an unsuccessful transmission.

Claim Rejections - 35 USC § 102 or 103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 8** is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Gendel (U.S. Pat No. 6,608,821).

With regard to cl. 8, it is inherent that

receiving a signal during a time slot (slot time in Fig. 3, col. 5, ln. 49) at a radio interface (receiver, col. 5, ln. 54),

extracting from a first part (1 in slot time in Fig. 3) of said signal a number of information symbols of a first kind (packet from Tx#1 in Fig. 3),

extracting from a second part (2 in slot time in Fig. 3) of said signal a number of information symbols of a second kind (packet from Tx#2 in Fig. 3),

attempting the decoding of said information symbols of a first kind (it is inherent or it would have been obvious that the receiver decodes the packet from Tx#1 after the receiver extracts the packet from Tx#1 from '2' in the slot time),

attempting the decoding of said information symbols of a second kind (it is inherent or it would have been obvious that the receiver decodes the packet from Tx#2 after the receiver extracts the packet from Tx#2 from '1' in the slot time), and

accepting as received those information symbols (resulting Rx signal, col. 5, ln. 53) the decoding of which proved to be successful (if there is data packet collision, only correct data is received, col. 5, ln. 57-58).

Claim Rejections - 35 USC § 103

8. **Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagerman in view of obviousness.

With regard to cl. 12, Hagerman discloses a transmitter arrangement (transceivers, col. 4, ln. 67) for maintaining multiplexed communication connections in a telecommunication system based on time division multiple access. However, Hagerman fails to explicitly show a burst formatter or means for providing the burst formatter with information symbols of first and second kind.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include a burst formatter in order to put together the TDMA timeslot structure as defined in Fig. 8. Moreover, it would have been obvious that there is input into a burst formatter (means for providing the burst formatter with information symbols). (Hagerman further discloses a data streams intended for two terminals, col. 5, ln. 54-55)

The suggestion/motivation for doing so would have been to provide for the method as disclosed in cl. 1. Therefore, it would have been obvious to add a burst formatter and means for providing the burst formatter, to implement the method in cl. 1, to obtain the invention as specified in cl. 12.

With regard to cl. 13, Hagerman further discloses a transmitter arrangement according to cl. 12, wherein said means for providing the burst formatter with information symbols of a first kind comprise a first transmission subchain (DATA1 and DATA2 were parts of the same data streams, col. 5, ln. 54-55) and said means for providing the burst formatter with information symbols of a second kind comprise a

Art Unit: 2667

second transmission subchain (DATA1 and DATA2 were parts of the same data streams, col. 5, ln. 54-55), so that said information symbols of a first kind belong to a different communication connection than said information symbols of a second kind.

Allowable Subject Matter

9. Claims 19,20,22-28 are allowed.

10. Claims 3-7,9-11,14,16-18,21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BW

BW
October 30, 2005


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 287 10/31/05